

Idaho Observational Seat Belt Survey

2003

Final Report

Prepared by the Office of Highway Safety

IDAHO TRANSPORTATION DEPARTMENT

P.O. BOX 7129

Boise, Idaho 83707-1129

(208) 334-8100

August 26, 2003

Background

The methodology concerning the observational seat belt survey was changed in 1998 in accordance with The National Highway Traffic Safety Administration's (NHTSA) guidelines. An entirely new sample of observation sites was selected using a two-stage probabilistic sampling method. The method of analysis also changed to correct for the probabilistic sampling and determine the standard error correctly. Comparisons of 1998 and future surveys to historical data (1986 – 1997 surveys) should be made with caution as the new methodology differs greatly from the previous methodology.

It is physically impossible to observe every front seat occupant of every vehicle on every roadway for every day of the year. For this reason, a sample of sites was taken that covers the state geographically and captures the different types of traffic patterns, by adequately selecting the different types of roadways. The sample was selected randomly; however, counties with higher Annual Vehicle Miles of Travel (AVMT) and roadways with greater Average Daily Traffic (ADT) were more likely to be picked. While this helps to insure a cost-effective sample, it also introduces bias that must be accounted for and corrected in the analysis. Site-specific weights are calculated for a number of aspects and special software is used in the estimation process. The following table shows the 2003 estimated statewide usage, the standard error and the 95% confidence interval for the statewide estimate.

The estimated usage is the percentage of people wearing seat belts. The standard error is the average difference between the observed usage at each site and the estimated usage. The standard error is also an indication of how precise the sample is. The lower and upper 95% confidence limits define the 95% confidence interval. The 95% confidence interval is derived from the estimated usage and the standard error. The appropriate interpretation of the confidence interval is that if we were to do 100 surveys, we would expect 95 out of the resulting 100 confidence intervals to contain the “true” usage. The “true” usage is what we would get if we could observe every front seat occupant of every vehicle on every road for every day of the year. It is easier to state that we are 95% confident the “true” statewide usage in 2003 lies between the 67.3% and 76.1%.

2003 Statewide Seat Belt Usage

Estimated Statewide Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
71.7%	2.3%	67.3%	76.1%

2003 Statewide Seat Belt Usage by Vehicle Type

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Passenger Cars	77.0%	2.2%	72.6%	81.3%
Vans & SUV's	76.2%	1.6%	73.0%	79.4%
Pick-Up Trucks	58.4%	2.8%	52.8%	63.9%

The estimated seat belt usage for pick-up truck occupants continues to be significantly lower than seat belt usage for either passenger cars or vans and sport utility vehicles (SUV's).

2003 Seat Belt Usage by Transportation District

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
District 1	76.5%	1.4%	73.9%	79.2%
District 2	74.3%	1.3%	71.8%	76.9%
District 3	78.8%	1.6%	75.6%	82.0%
District 4	59.3%	2.5%	54.4%	64.2%
District 5	53.5%	1.8%	50.0%	57.0%
District 6	59.2%	1.4%	56.4%	61.9%

2003 Seat Belt Usage by County

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Ada	81.0%	1.0%	79.1%	82.9%
Bannock	55.7%	2.0%	51.8%	59.7%
Bingham	47.4%	1.6%	44.2%	50.5%
Blaine	68.7%	0.6%	67.6%	69.8%
Bonner	74.4%	0.8%	72.9%	75.9%
Bonneville	59.4%	2.4%	54.7%	64.2%
Canyon	75.1%	2.4%	70.4%	79.7%
Cassia	53.9%	3.3%	47.5%	60.4%
Elmore	67.9%	8.6%	51.1%	84.8%
Kootenai	78.6%	2.4%	73.9%	83.3%
Latah	74.2%	1.9%	70.5%	77.8%
Madison	58.8%	1.1%	56.7%	60.9%
Minidoka	55.6%	3.6%	48.5%	62.7%
Nez Perce	74.4%	1.7%	71.1%	77.8%
Payette	71.9%	4.5%	63.1%	80.7%
Twin Falls	63.0%	1.5%	60.1%	65.8%

Not all counties in Idaho are included in the sample. For a more detailed explanation of how and why these counties were selected, please refer to Appendix A (page 11).

2003 Seat Belt Usage by Day of the Week

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Sunday	62.5%	9.8%	43.4%	81.7%
Monday	70.2%	2.7%	64.8%	75.6%
Tuesday	68.9%	3.7%	61.5%	76.2%
Wednesday	68.4%	3.5%	61.6%	75.3%
Thursday	73.6%	4.4%	64.9%	82.3%
Friday	74.5%	5.0%	64.7%	84.4%
Saturday	79.4%	1.6%	76.2%	82.7%

2003 Seat Belt Usage by Type of Vehicle

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Passenger Cars	77.0%	2.2%	72.6%	81.3%
Vans & SUV's	76.2%	1.6%	73.0%	79.4%
Pick-Up Trucks	58.4%	2.8%	52.8%	63.9%

2003 Usage by Observation Site

County	Location	Designated Road	Intersection	Usage
Bonner	1	Cedar (US 95)	at N. 2nd	79.7%
	2	Albeni Rd (US 2)	at SH 57	69.3%
	3	Dufort Rd	at US 95	74.3%
	4	US 95	at Larch	72.1%
	5	Cedar	at Boyer	76.0%
	6	US 2	at Division	79.2%
Kootenai	7	I-90 - Off Ramp	Exit # 7 (SH 41)	79.7%
	8	Mullan Rd	at SH 41	77.8%
	9	SH 41	at SH 53	74.3%
	10	SH 53	at US 95	77.5%
	11	15th Street	at Sherman Ave	71.4%
	12	I-90 - Off Ramp	Exit #14	76.7%
Latah	13	US 95	At SH 53	89.7%
	14	Lincoln Way (US 95)	at Appleway	87.9%
	93	SH 8	at Blaine	76.0%
	94	6th St	at Blaine	82.0%
	95	Jackson St	at 6th St	73.5%
	96	US 95	at Sweet Ave	68.0%
Nez Perce	97	US 12	at 3rd Ave N.	73.0%
	98	Main	at 13th St	79.5%
	99	16th Ave	at 17th St.	69.0%
	100	Powers Ave	at Thain Rd	76.0%
Ada	15	Overland	at Meridian Rd.	75.1%
	16	SH 55	at Floating Feather	83.3%
	17	Collister Dr	at Catalpa Dr	77.5%
	18	Mcmillan Rd	at Locust Grove	64.0%
	19	Franklin Rd	at Ten Mile	70.8%
	20	I-184 - Off Ramp	Curtis Road Exit	82.2%
	21	Chinden Blvd	at 36th St.	77.6%
	22	Cole Road	at Emerald	87.9%
	23	9th Street	at River St	82.7%
	24	Hayes St	at 13th St	87.1%
	25	N. Liberty	at Fairview	58.5%

2003 Usage by Observation Site - Continued

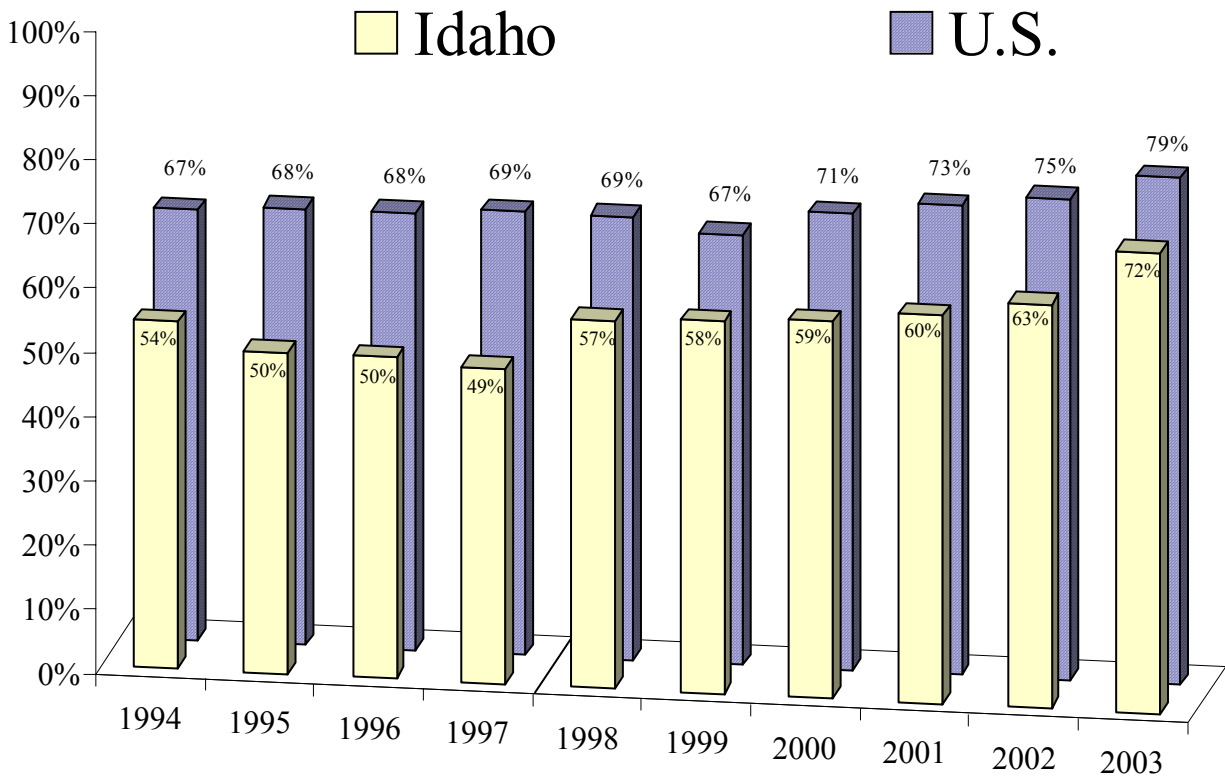
County	Location	Designated Road	Intersection	Usage
Canyon	26	Gekeler Rd	at W Boise Ave	79.4%
	27	Eagle Road	at Chinden Blvd	83.8%
	28	Jupiter (Entertainment)	at Overland	80.0%
	29	Adams Rd.	at E 44th St	89.4%
	30	SH 16	Jct w/ SH 44	79.7%
	31	Linden	at Indiana	74.3%
	32	US 20	at Middleton Rd	81.8%
	33	SH 55	at South 10th Ave	71.9%
	34	Centennial Way	at SH 19	74.4%
	35	I-84 - Off Ramp	Exit # 38-Garrity	88.0%
Elmore	36	Amity Rd	at South Side Blvd	71.6%
	37	Greenhurst	at 12th Ave	67.8%
	38	7th Ave	at 3rd St	71.3%
	39	I-84 Business Loop	at SH 51	59.0%
	40	I-84 - Off Ramp	Exit # 95	93.0%
	41	SH 51	at SH 67	63.0%
	42	American Legion	at 3rd East	68.2%
	43	3rd E St	at 10th N St	61.7%
Payette	44	McMurtrey	at Canyon Creek	51.9%
	45	US 95 (16th St)	at 8th St	76.5%
	46	8th Street	at Center St	62.2%
	47	US 95	at NW 16th St	83.7%
Blaine	48	SH 72	at US 30	70.3%
	67	Gannett Rd	at US 20	61.7%
	68	US 20	at Jct US 93/26	71.3%
	69	US 20	at SH 75	76.7%
	70	Saddle Rd	at Sun Valley Rd	72.7%
Cassia	71	Main St (SH 75)	at 1st St	71.2%
	72	Main St (SH 75)	at Bullion St	67.3%
	49	E. 5th St	at Overland	47.1%
	50	W Main	at Oakly	54.3%
	51	SH 77	at SH 81	52.7%
	52	I-84 - Off Ramp	Exit # 216	65.5%

2003 Usage by Observation Site – Continued

County	Location	Designated Road	Intersection	Usage
Minidoka	53	200 S.	at SH 27	48.8%
	54	Overland Ave	at 14th St	71.0%
	55	I-84 - Off Ramp	Exit #211 Rupert/Heyburn Exit	70.9%
	56	I-84 - Off Ramp	Exit # 201 Paul Exit	53.5%
	57	Overland Rd	at 5th St	70.8%
	58	O St	at 21st St	55.7%
Twin Falls	59	SH 24 (8th St)	at Meridian	67.0%
	60	SH 25	at SH 27	44.2%
	61	3700 N	at US 93	57.6%
	62	Blue Lakes Blvd	at Falls Ave	68.9%
	63	3rd St E	at 6th Ave N	54.3%
	64	Washington St	at South Park	62.9%
Bannock	65	Kimberly Rd (US 30)	at Eastland	65.1%
	66	Eastland Dr	at Orchard	70.5%
	73	Garrett Way (US 30)	at E Gould St	55.1%
	74	West Quinn Rd	at Poleline Rd	53.3%
	75	I-15 - Off Ramp	Exit # 47 (US 30)	85.3%
	76	S Main	at Benton Rd	54.3%
Bingham	77	Fir St	at US 91	47.9%
	78	US 91	at Fir St	40.9%
	79	W Judicial St	at Broadway	48.4%
Bonneville	80	I-15 - Off Ramp	Exit # 89	67.0%
	81	SH 43 (Ucon Exit US 20)	at SH 43/Yellowstone	47.3%
	82	Sunnyside Dr	at Woodruff Ave	55.6%
	83	Lincoln Rd	at Woodruff Ave	54.3%
	84	US 26	at 15th E (St Leon Rd)	63.3%
	85	Grandview Dr	at Skyline Dr	62.9%
Madison	86	US 20	Riverside - Exit #93	67.7%
	87	N Holmes Ave	at 5th St	58.7%
	88	I-15BL (Exit #113)	at Jct US 91	71.8%
	89	S 2nd E	at E 1st S	58.8%
	90	S 2nd W	at W 2nd S	58.6%
	91	US 20	at SH 33 (Rexburg Exit)	52.7%
	92	E Main St	at Center St	61.4%

Seat Belt Usage Trends

Idaho Seat Belt Usage vs. U.S. Seat Belt Usage



Slight changes in the observational seat belt survey existed from year to year prior to 1998. In 1998 the observational survey was completely revised to ensure national compliance and to produce a more accurate usage estimate. Comparisons of 1998 and future surveys to historical surveys (1986 – 1997) should be made conservatively as the new methodology differs greatly from the previous methodologies. The U.S. observed usage is calculated from the observed usage rates in each state. This figure is obtained from the National Center for Statistics and Analysis.

From 2002 to 2003 the Idaho observed seat belt usage increased from 62.9% to 71.7%. This represents a 14% increase in seat belt usage from 2002 to 2003. The seat belt law was strengthened July 1, 2003.

Observed Usage - Transportation District by Year

	1999	2000	2001	2002	2003	Ave Yearly Change 1998-2002
District 1	52.1%	62.1%	57.7%	70.6%	76.5%	10.7%
District 2	58.5%	56.7%	56.6%	68.4%	74.3%	6.6%
District 3	64.7%	61.9%	64.6%	63.3%	78.8%	5.6%
District 4	42.2%	45.9%	51.0%	53.6%	59.3%	8.9%
District 5	45.2%	46.7%	54.4%	55.4%	53.5%	4.5%
District 6	51.6%	51.5%	56.4%	57.8%	59.2%	3.5%

Observed Usage – County by Year

	1999	2000	2001	2002	2003	Ave Yearly Change 1998-2002
Ada	65.8%	63.8%	66.8%	64.3%	81.0%	6.0%
Bannock	48.7%	49.5%	56.0%	58.5%	55.7%	3.6%
Bingham	39.7%	39.6%	51.8%	45.2%	47.4%	5.7%
Blaine	48.9%	38.9%	52.3%	60.0%	68.7%	10.8%
Bonner	48.4%	57.2%	54.4%	70.9%	74.4%	12.2%
Bonneville	58.8%	56.6%	63.4%	62.5%	59.4%	0.5%
Canyon	62.9%	58.3%	58.3%	63.2%	75.1%	5.0%
Cassia	38.7%	40.5%	49.1%	49.6%	53.9%	8.9%
Elmore	47.3%	55.0%	57.7%	52.9%	67.9%	10.3%
Kootenai	53.4%	64.6%	59.5%	70.2%	78.6%	10.8%
Latah	60.5%	61.5%	57.6%	74.0%	74.2%	6.0%
Madison	41.6%	45.1%	49.7%	52.4%	58.8%	9.1%
Minidoka	35.6%	44.3%	48.1%	48.5%	55.6%	12.1%
Nez Perce	57.0%	52.3%	56.2%	65.4%	74.4%	7.3%
Payette	66.6%	59.6%	63.3%	61.2%	71.9%	2.5%
Twin Falls	46.4%	52.6%	54.4%	58.9%	63.0%	8.0%

Observed Usage – Vehicle Type by Year

	1999	2000	2001	2002	2003	Ave Yearly Change 1998-2002
Passenger Cars	63.1%	64.8%	66.7%	66.4%	77.0%	7.0%
SUV's/Vans	61.2%	60.7%	62.2%	70.0%	76.2%	7.7%
Pickup Trucks	46.9%	46.0%	48.8%	50.9%	58.4%	7.7%
Overall Usage	57.9%	58.6%	60.4%	62.9%	71.7%	7.5%

2003 Observed Usage – Vehicle Type by District

ITD District	Passenger Cars	Vans and		All Vehicles
		Sport Utility Vehicles	Pickup Trucks	
1	83.0%	79.7%	64.3%	76.5%
2	82.2%	79.4%	60.5%	74.3%
3	81.8%	81.6%	69.4%	78.8%
4	63.1%	65.6%	48.5%	59.3%
5	57.5%	64.7%	36.9%	53.5%
6	67.7%	66.9%	37.0%	59.2%
Statewide	77.0%	76.2%	58.4%	71.7%

2003 Observed Usage – Vehicle Type by County

County	Passenger Cars	Vans and		All Vehicles
		Sport Utility Vehicles	Pickup Trucks	
Ada	83.9%	82.8%	71.2%	81.0%
Bannock	57.6%	72.2%	39.5%	55.7%
Bingham	57.4%	45.3%	28.9%	47.4%
Blaine	73.1%	76.6%	48.3%	68.7%
Bonner	85.2%	74.5%	63.1%	74.4%
Bonneville	66.3%	66.1%	43.3%	59.4%
Canyon	77.7%	80.1%	67.1%	75.1%
Cassia	59.9%	57.9%	42.9%	53.9%
Elmore	65.6%	77.1%	63.8%	67.9%
Kootenai	81.5%	85.0%	65.8%	78.6%
Latah	82.7%	81.3%	57.4%	74.2%
Madison	69.2%	67.8%	28.3%	58.8%
Minidoka	59.6%	56.8%	48.8%	55.6%
Nez Perce	81.8%	78.0%	62.4%	74.4%
Payette	73.7%	77.4%	66.3%	71.9%
Twin Falls	66.5%	71.3%	52.4%	63.0%